



Completed north and south catwalks in morning fog.



Spinning wheel in action on south catwalk looking toward west anchorage.



Spinning equipment at east anchorage.



Spinning equipment at east anchorage.

## Seeking out public opinion

### Coming Soon: Web Survey on Toll Business Practices

The new suspension bridge is nearly three-quarters complete, and in roughly 18 months it will open to traffic. In preparation for that day, the state Department of Transportation's tolls program will soon be writing toll guidelines. Tolls staff wish to know what the public thinks about guidelines related to methods of paying tolls, establishing electronic toll accounts, incentive (discount) programs, violations/penalties and much more. These guidelines will affect everyone who uses the new bridge. By mid-November, we will be posting the two dozen or so questions to our web site, and hope that bridge users – from the frequent commuter to the holiday traveler – will visit [www.tacomanarrowsbridge.com](http://www.tacomanarrowsbridge.com) and respond to the questionnaire. Here's a sampling of questions to come:

- Prior to the bridge opening, if WSDOT offered free toll trips as an incentive to sign up for an electronic toll account would you enroll early? If yes, how early?
- The customer service walk-in hours will likely be Monday – Friday, 7a.m. to 1p.m. When might you most likely use the walk-in service centers?

## Public Outreach

- Bridge presentations given to students from Bethany Lutheran and Ridgetop Junior High schools.
- Provided tours to a visiting Japanese delegation, and the Washington Transportation Commission.
- Provided bridge video and interviews to two local broadcast groups for 1/2-hour shows (Comcast Channel 29 "Reaching Out" and Trinity Broadcast).
- Provided information for feature stories about cable spinning for the Seattle Times, Peninsula Gateway, Kitsap Sun, and the Tacoma News Tribune.
- Presentations were given to Russell Investment Group, the Washington Society of Professional Engineers, and Lockheed Martin.

The first of five toll workshops was held in Gig Harbor to get public feedback on toll business practices.



## Toll Operations

### October

- Conducted Toll Public Workshop in Gig Harbor
- Approved Factory Acceptance Test (FAT)
- Toll staff reviewed TransCore's Open Road Tolling lane testing site in Albuquerque, NM
- Installation Readiness milestone met October 30.

### November

- Four Toll Public Workshops to be held
- Toll workshop survey to be posted on internet
- Installation of tolling system hardware to begin
- Finalize test procedures for January Factory Acceptance Test

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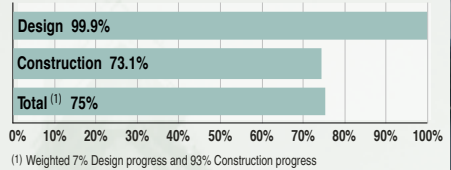
Filiz Satir, Community Outreach (253) 534-4670  
Claudia Cornish, Media Relations (253) 534-4646

For more information about the bridge project, visit the TNB web site:

[www.tacomanarrowsbridge.com](http://www.tacomanarrowsbridge.com)



## Progress to Date (% Complete)



## New Bridge Statistics:

**Bridge Length:**  
5,400 ft. *(overall)*

**Main Span:**  
2,800 ft. *(tower to tower)*

**Deck Panels:**  
46 sections, 120 ft. by 78 ft. *(each)*

**Tower Height:**  
510 ft. tall  
8,500 cubic yds. concrete *(per tower)*

**Tower Foundations or Caissons (each):**

- 1.7 million lbs. steel *(total)*
- 850,000 lbs. steel *(base or cutting edge)*
- 6 million lbs. rebar
- 30,000 cubic yards concrete

**Anchorage (each):**

- 20,600 cubic yards concrete
- 900,000 lbs. rebar
- 90 million lbs. *(total weight)*

**Cable Diameter:** 20.5 inches

**Steel Bundles per Cable:** 19

**Wires per Bundle:** 464

**Structural Steel:**  
35.5 million lbs.  
*(excludes weight of cables)*

49.7 million lbs.  
*(all steel excluding towers)*

**New Parallel Bridge Completed:**  
Early 2007

**1950 Bridge (Retrofit) Completed:**  
Early 2008

# Tacoma Narrows Bridge Project

## Monthly Progress Report

October 2005



Cable spinning on south catwalk.

First completed strand (south catwalk).

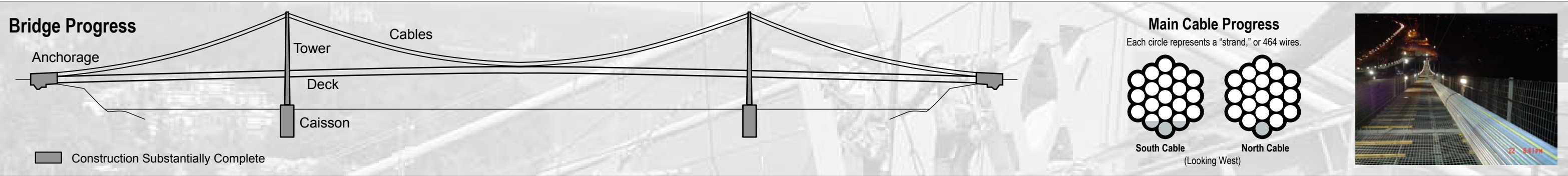
## Cable Spinning Begins

The project reached a major milestone in October with the beginning of cable spinning. On October 13, crews pulled the first suspension cable wire from the Tacoma anchorage over the tops of the towers to the Gig Harbor anchorage and back again. This wire was the first of 8,816 needed to make one main suspension cable. By the end of October crews had completed one "strand" above each of the two (north and south) catwalks. A strand is composed of 464 individual wires slightly smaller than the thickness of a pencil. (See photo above for first completed strand being clamped and bundled.) Each of the new main suspension cables consists of 19 strands.

The spinning wheel shown in the photo to the right is at the east anchorage. It is about to begin its trip to the west anchorage with four wires. The wheel travels across the Narrows from the east anchorage to the west anchorage and back again. Once all 464 wires have made this journey, they are compacted and wrapped to complete one "strand." A total of 24 tram support frames and strand formers located every 220 feet across the bridge help align and place the wire as it is spun. For the next three months, crews will spin the steel wire across the Narrows, alternating between the north and south cables to maintain balance. Crews will be working around the clock with two 10-hour shifts spinning cable during the day and a third crew adjusting cable tension at night when temperatures are more stable.







## Bridge Progress

In October, Tacoma Narrows Constructors (TNC) installed the tram support frames, spliced and installed the tram cable and pulled both towers almost two feet toward shore in preparation for cable spinning which began in mid-October. The first strand of the south cable was completed, with spinning of strands #2 and #3 in process. TNC completed spinning and profile adjustment on the first strand for the north cable. Crews also installed two toggle anchors for the ocean vessels, which will deliver the new bridge deck sections to the site from Korea next spring.

Bridge activities for November include:

- Continue with spinning operations
- Remove wind struts from both towers
- Install two more anchors for ocean vessels

## Milestone Summary

Milestone	Contract	TNC	Months Ahead
Complete toll facility construction	08 Dec 05	29 Sep 05	2.3
Lift first bridge deck unit	07 May 06	20 Mar 06	1.6
Complete superstructure joining of deck sections	03 Dec 06	31 Aug 06	3.1
Complete new bridge and open to traffic	02 Apr 07	02 Apr 07	0.0
Complete existing bridge modifications	26 Feb 08	26 Feb 08	0.0

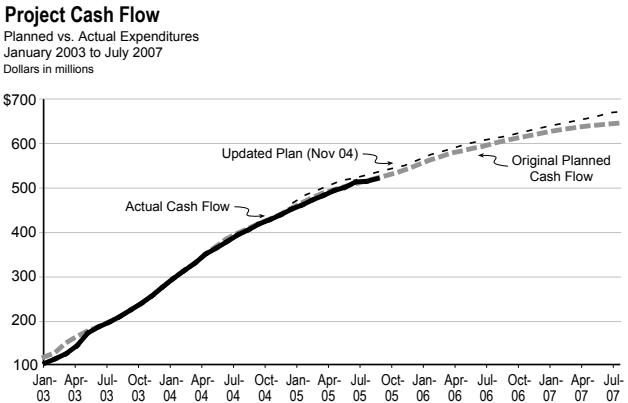
## Roadway/Roadside Progress

Roadway activities in October included work at Living War Memorial Park, landscaping at the Jackson St. on ramp and along east bound main line on the Gig Harbor side, seismic retrofit at the existing bridge east anchorage and on the Tacoma tower, and erosion control preparation for the winter. Pond C is now fully functional and trench drain installation on the west end of the new bridge is nearly complete.

In November, Living War Memorial Park will be completed with turn-over to the City of Tacoma anticipated. Landscaping work will continue, with thousands of plants going in all along the highway and at the ramps. Seismic retrofit work will continue at the existing bridge east anchorage and on the Tacoma tower on the existing bridge. Crews will install illumination and traffic cameras at Jackson St., 24th St., and 36th St. ramps. Crews will complete installation of drainage structures at the west end of the new bridge.

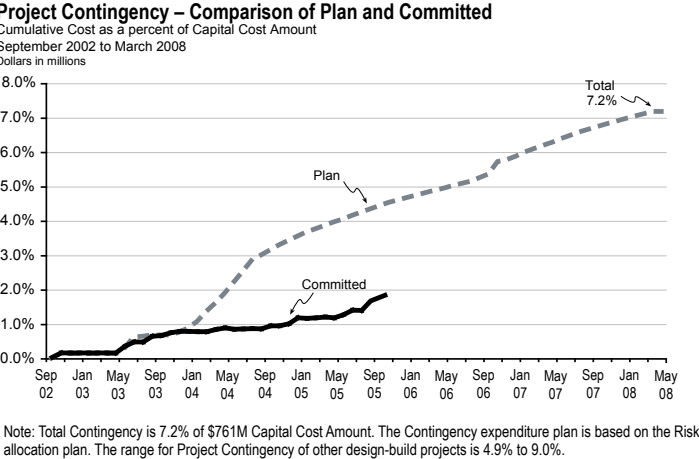
## Financial Status

Project Cost Summary (in Millions)	Budgeted	Expended
Design-Build Contract	\$615.0	\$513.4
Toll System Contract	9.2	4.6
WSDOT Oversight	41.0	17.7
Contingencies Committed	14.2	9.9
Contingencies Remaining	40.5	
Phase I Dev. Cost (UIW)	40.5	39.8
Total	\$760.4	\$585.4
Total Expended/Total Cost	77.0%	



## Project Contingency Use

WSDOT has budgeted \$54.7 million for contingencies on this project. To date, \$14.2 million have been committed to changes in the project. These changes are the results of right-of-way settlements, changed permit conditions, pricing efficiencies, community-driven improvements, contractual discrepancies, and maintenance and operations life cycle considerations.



## Environmental Performance

The bridge project prepared for the winter season by installing soil stabilization and erosion control measures throughout the project site. The project also recently updated the Stormwater Pollution Prevention Plan (SWPPP), which addresses management of stormwater to ensure discharge within permitted limits, and measures taken to prevent pollution and spills to the environment. The WSDOT Headquarters Environmental Office performed an independent fall assessment of the project's Temporary Erosion and Sedimentation Control (TESC) measures. Among many things evaluated, the project site's vulnerability to erosion and/or off-site sediment release was reviewed and received a very favorable score of 3 (with 1 being the best, and 10 the worst). This score reflects the commitment by WSDOT and Tacoma Narrows Constructors (TNC) staff to improve on-site readiness.

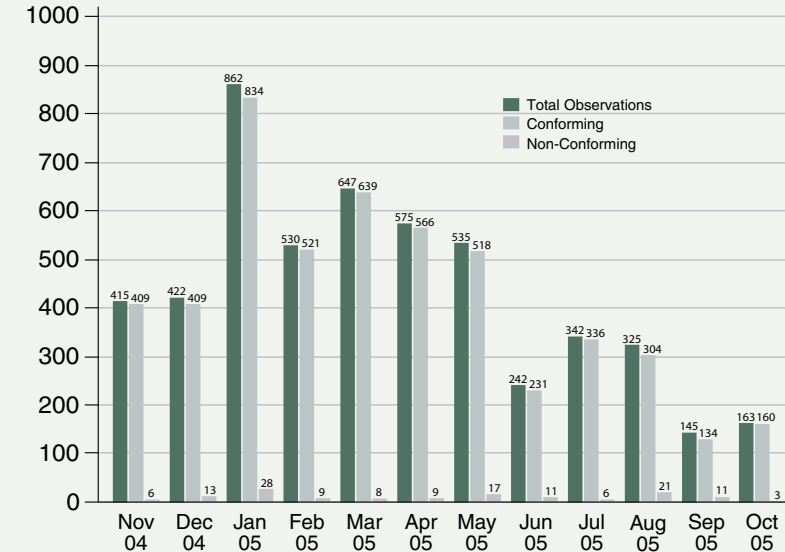
Another positive environmental move is TNC's decision to reduce the number of anchors needed to anchor the vessels that will carry the bridge deck sections to the site in 2006. TNC's original plan required 30 anchors. Their revised plan requires only four, significantly reducing potential environmental impacts.



West of Toll Plaza - Check dams, permanent landscaping, permanent paving.

## Quality Performance

During October, WSDOT staff completed the following audits:



WSDOT employs a Compliance Audit System to ensure that work on the project conforms to contract requirements. Compliance audits are conducted regularly in two areas: construction activities occurring in the field, and management policies and systems designed to ensure a quality product. Field audits measure construction performance against the contract plans and specifications. Management system audits measure performance against such items as the Design/Builder's Quality Management Plan; WSDOT policies and procedures; Project Management Plan; and other contractual and legal requirements.

Compliance Audit System findings for the month of October are as follows:

- 18 individual audits of design/builder work activities;
- 163 contractual requirements observed and verified for compliance; and
- 3 non-conformance findings;
- 26 total outstanding non-conformance findings.

The 26 outstanding non-conformances are within normal expectations for a project of this size. WSDOT continues to actively resolve the non-conformance issues with the design-builder. The overall audit findings continue to indicate the construction work is generally complying with contract requirements.

## Safety Performance

1,963,398 hours worked with one lost time accident.

October-05	Hours Worked	Recordable Cases	LWD Cases	Lost Workdays	Restricted Cases	Restricted Days	Fatalities
TNC	43,607	3	0	0	0	0	0
WSDOT	6,265	0	0	0	0	0	0
Total	49,872	3	0	0	0	0	0
Project to Date							
TNC	1,758,625	19	1	22	5	186	0
WSDOT	204,773	0	0	0	0	0	0
Total	1,963,398	19	1	22	5	186	0